Contents of Volume 8

Number 1

D. Condorelli, V. Nicoletti, P. Carpano, L. Insirello, R. Avola and A. M. Giuffrida-Stella — 1 — Epidermal growth factor treatment during early postnatal development: glutamine synthetase and glutamate decarboxylase activities in mouse brain

G. S. Sohal, H. S. Bal, L. R. Campbell, I. Husain, T. Arumugam and K. Kumaresan — 9 — Synapse formation on quail trochlear neurons transplanted in duck embryos before naturally occurring motor neuron death

S. M. Peirone, L. Sisto-Daneo and G. Filogamo — 17 — Embryogenesis of the avian iris sphincter muscle: *in vivo* and *in vitro* studies

S. Sharma, J. T. Hansen and M. F. D. Notter — 33 — Effects of NGF and dibutyryl cAMP on neuronal differentiation of embryonal carcinoma cells

M. E. Martín, A. Alcázar and M. Salinas — 47 — Subcellular and regional distribution of casein kinase II and initiation factor 2 activities during rat brain development

L. A. Gomez, A. Brusco and J. P. Saavedra — 55 — Immunocytochemical study of S-100 positive glial cells in the brainstem and spinal cord of the rat embryo

M.-C. Senut, Y. Lamour, J. Lee, P. Brachet and E. Dicou — 65 — Neuronal localization of the nerve growth factor precursor-like immunoreactivity in the rat brain

A. R. Sizer, Å. Rökaeus and G. A. Foster — 81 — Analysis of the ontogeny of galanin in the rat central nervous system by immunohistochemistry and radioimmunoassay

C. Faivre-Sarrailh, C. Ferraz, J. P. Liautard and A. Rabié — 99 — Effect of thyroid deficiency on actin mRNA content in the developing rat cerebellum

J. Luthman, M. Eriksdotter-Nilsson and G. Jonsson — 107 — Structural and neurochemical effects in mouse cerebellum following neonatal methylazoxymethanol and 6-hydroxydopamine treatment

Forthcoming Papers — i

Number 2

Editorial — 119

V. Hamburger — 121 — The S. Kuffler lecture. The rise of experimental neuroembryology. A personal reassessment

S. Rees, M. Clark, M. Snowden and R. Harding — 133 — The effects of intrauterine growth retardation on the structural development of cranial nerves (optic, trochlear) in fetal sheep

C. M. Regan, A. M. C. Gorman, O. M. Larsson, C. Maguire, M. L. Martin, A. Schousboe and D. C. Williams — 143 — *In vitro* screening for anticonvulsant-induced teratogenesis in neural primary cultures and cell lines

H. C. Bauer and U. Tontsch — 151 — Glial-conditioned medium and attachment to ConA are essential for long-term culture of cortical neurons

M. Virgili, O. Barnabei and A. Contestabile — 159 — Regional maturation of neurotransmitter-related and glial markers during postnatal development in the rat

V. Spina-Purrello, R. Avola, D. F. Condorelli, V. G. Nicoletti, L. Insirello, S. Reale, A. Costa, N. Ragusa and **A. M. Giuffrida Stella** 167 ADP-ribosylation of proteins in brain regions of rats during postnatal development

P. Haninec and **M. Grim** 175 Localization of dipeptidylpeptidase IV and alkaline phosphatase in developing spinal cord meninges and peripheral nerve coverings of the rat

B. Alston-Mills, B. Shankarappa and **L. Douglass** 187 Calcium and calmodulin levels in late embryonic and early hatched Japanese quail brain

M. Pákáski, P. Kása, F. Joó and **J. R. Wolff** 193 Cerebral endothelial cell-derived laminin promotes the outgrowth of neurites in CNS neuronal cultures

S. L. Erdö and **J. R. Wolff** 199 Postnatal development of the excitatory amino acid system in visual cortex of the rat. Changes in ligand binding to NMDA, quisqualate and kainate receptors

S. L. Erdö and **J. R. Wolff** 205 Postnatal development of the excitatory amino acid system in visual cortex of the rat. Changes in uptake and levels of aspartate and glutamate

A. Frandsen and **A. Schousboe** 209 Development of excitatory amino acid induced cytotoxicity in cultured neurons

M. Mirmiran, F. A. Dijcks, N. P. A. Bos, J. A. Gorter and **D. Van der Werf** 217 Cortical neuron sensitivity to neurotransmitters following neonatal noradrenaline depletion

R. T. Robertson, T. G. Gragnola and **J. Yu** 223 Patterns of transiently expressed acetylcholinesterase activity in cerebral cortex and dorsal thalamus of developing rats with cytotoxin-induced microencephaly

Forthcoming Papers i

Number 3

I. Nitsos and **S. Rees** 233 The effects of intrauterine growth retardation on the development of neuroglia in fetal guinea pigs. An immunohistochemical and an ultrastructural study

A. Fichard, J.-M. Verna and **R. Saxod** 245 Effects of tunicamycin on the avoidance reaction of epidermis by sensory neurites in co-cultures

K. R. Huff, W. Schreier and **L. Ibric** 255 Proliferation-related responses in rat astrocytes to epidermal growth factor

X.-H. Zhao and **Y. Nomura** 267 Age-related changes in uptake and release on L-[^{3}H]-noradrenaline in brain slices of senescence accelerated mouse

O. Nybroe, A.-M. Dalseg and **E. Bock** 273 A developmental study of soluble L1

C. V. Vorhees, S. L. Rauch and **R. J. Hitzemann** 283 Prenatal phenytoin exposure decreases neuronal membrane order in rat offspring hippocampus

M. Del Fiacco, A. Diana, A. Floris and **M. Quartu** 289 Substance P-like immunoreactivity in human prenatal hippocampal formation

G. Pegolo, V. Askanas and **W. King Engel** 299 Expression of muscle-specific isozymes of phosphorylase and creatine kinase in human muscle fibers cultured aneurally in serum-free, hormonally/chemically enriched medium

M. A. Corner and M. Mirmiran 309 Spontaneous neuronal firing patterns in the occipital cortex of developing rats

L. Wuarin, N. Sidell and J. de Vellis 317 Retinoids increase perinatal spinal cord neuronal survival and astroglial differentiation

C. Nyquist-Battie 327 Changes in the expression of acetylcholinesterase molecular forms during rat heart development

S. C. Bondy, M. Nakla, S. F. Ali and G. Ahmad 337 Cerebral ornithine decarboxylase levels following gestational exposure to cocaine

Announcement 343 8th Biennial Meeting of the International Society for Developmental Neuroscience

Forthcoming Papers i

PLASTIC AND TROPHIC EFFECTS OF AMINO ACID TRANSMITTERS IN THE DEVELOPING NERVOUS SYSTEM

Number 4

R. Balázs 345 Preface

R. Balázs, N. Hack and O. S. Jørgensen 347 Interactive effects involving different classes of excitatory amino acid receptors and the survival of cerebellar granule cells in culture

J. M. Ruijter and R. E. Baker 361 The effects of potassium-induced depolarization, glutamate receptor antagonists and N-methyl-D-aspartate on neuronal survival in cultured neocortex explants

D. E. Brenneman, C. Yu and P. G. Nelson 371 Multi-determinate regulation of neuronal survival: neuropeptides, excitatory amino acids and bioelectric activity

A. J. Patel, A. Hunt and C. Sanfeliu 379 Cell-type specific effects of N-methyl-D-aspartate on biochemical differentiation of subcortical neurons in culture

A. G. M. Bulloch and G. C. Hauser 391 Sprouting by isolated *Helisoma* neurons: enhancement by glutamate

M. P. Mattson and B. Rychlik 399 Glia protect hippocampal neurons against excitatory amino acid-induced degeneration: involvement of fibroblast growth factor

M. W. Oliver, J. Larson and G. Lynch 417 Activation of the glycine site associated with the NMDA receptor is required for induction of LTP in neonatal hippocampus

J. P. Rauschecker, U. Egert and A. Kossel 425 Effects of NMDA antagonists on developmental plasticity in kitten visual cortex

J. T. Greenamyre, D. S. Higgins, A. B. Young and J. B. Penney 437 Regional ontogeny of a unique glutamate recognition site in rat brain: an autoradiographic study

E. K. Messersmith and D. A. Redburn 447 Kainic acid lesioning alters development of the outer plexiform layer in neonatal rabbit retina

A. Michler 463 Involvement of GABA receptors in the regulation of neurite growth in cultured embryonic chick tectum

B. Belhage, G. H. Hansen and A. Schousboe 473 GABA agonist induced changes in ultrastructure and GABA receptor expression in cerebellar granule cells is linked to hyperpolarization of the neurons

E. Cherubini, C. Rovira, J. L. Gaiarsa, R. Corradetti and Y. Ben Ari — 481 — GABA mediated excitation in immature rat CA3 hippocampal neurons

P. E. Spoerri, C. G. Caple and F. J. Roisen — 491 — Taurine-induced neuronal differentiation: the influence of calcium and the ganglioside GM1

Announcement — 505 — A Conference on Environmental Determinants of Nervous System Development

Forthcoming Papers — I

Number 5

U. B. Schambra, J. M. Lauder, P. Petrusz and K. K. Sulik — 507 — Development of neurotransmitter systems in the mouse embryo following acute ethanol exposure: a histological and immunocytochemical study

U. Di Porzio, A. Zuddas, D. B. Cosenza-Murphy and J. L. Barker — 523 — Early appearance of tyrosine hydroxylase immunoreactive cells in the mesencephalon of mouse embryos

E. P. Fiedler, M. J. Marks and A. C. Collins — 533 — Postnatal development of two nicotinic cholinergic receptors in seven mouse brain regions

G. E. Richards, J. M. Lakoski, E. W. Black, R. E. Halpern, K. Ball and P. D. Gluckman — 541 — The ontogeny of [^{3}H]5-hydroxytryptamine binding in the lamb: effects of *in vivo* thyroidectomy

J. Luthman, E. Brodin, E. Sundström and B. Wiehager — 549 — Studies on brain monoamine and neuropeptide systems after neonatal intracerebroventricular 6-hydroxydopamine treatment

A. Contestabile, M. Virgili and O. Barnabei — 561 — Developmental profiles of cholinergic activity in the habenulae and interpeduncular nucleus of the rat

K. J. Rose and F. L. Strand — 565 — Accelerated neuromuscular development in the rat with prenatal exposure to nicotine

S. Péraldi-Roux, B. Nguyen-Than Dao, M. Hirn and J. Gabrion — 575 — Choroidal ependymocytes in culture: expression of markers of polarity and function

P. Dubovy and P. Haninec — 589 — Non-specific cholinesterase activity of the developing peripheral nerves and its possible function in cells in intimate contact with growing axons of chick embryo

A. Merchan-Perez, P. Gil-Loyzaga and M. Eybalin — 603 — Immunocytochemical detection of calcitonin gene-related peptide in the postnatal developing rat cochlea

A. Merchan-Perez, P. Gil-Loyzaga and M. Eybalin — 613 — Immunocytochemical detection of glutamate decarboxylase in the postnatal developing rat organ of Corti

Short Communication
A. Poncino, S. Geuna, E. Scherini, M. G. Giacobini Robecchi and G. Filogamo — 621 — DNA synthesis experimentally induced in neurons: tetraploidy or hyperdiploidy?

Announcement — 625 — Second International Springfield Symposium on Advances in Alzheimer Therapy

Forthcoming Papers — i

Number 6

THE CHOLINERGIC SYSTEM IN AGING

E. Giacobini — 627 — Preface

D. O. Smith, K. D. Williams and M. Emmerling	629	**Changes in acetylcholine receptor distribution and binding properties at the neuromuscular junction during aging**
J. L. Rosenheimer	643	**Factors affecting denervation-like changes at the neuromuscular junction during aging**
W. B. Alshuaib and M. A. Fahim	655	**Aging increases calcium influx at motor nerve terminal**
N. Robbins, M. Kuchynski, J. Polak and A. Grasso	667	**Motor nerve terminal restoration after focal destruction in young and old mice**
M. J. Forster and H. Lal	679	**Cholinergic modulation of aged-like retention deficits in young autoimmune mice**
K. A. Sherman and E. Friedman	689	**Pre- and post-synaptic cholinergic dysfunction in aged rodent brain regions: new findings and an interpretative review**
G. M. Gilad, V. H. Gilad and Y. Tizabi	709	**Aging and stress-induced changes in choline and glutamate uptake in hippocampus and septum of two rat strains differing in longevity and reactivity to stressors**
X. Zhang, G. Wahlström and A. Nordberg	715	**Influence of development and aging on nicotinic receptor subtypes in rodent brain**
Forthcoming Papers	i	